Page 12, between lines 27 and 28, insert:

--Detailed Description Of The Preferred Embodiment--.

Page 24, between lines 1 and 2, insert:

--What is claimed is:--.

Page 29, Please cancel this page entirely.

IN THE CLAIMS:

Cancel Claims 24-32 without prejudice or disclaimer.

Please amend the remaining claims as follows:

1. (Amended) A method for quantitative or qualitative determination of an analyte or its interaction or reaction kinetics in a system with at least two different phases, comprising the step of exciting a sample which may contain said analyte, and taking at least one measurement signal from at least one of the phases when the different phases are simultaneously present, each measurement signal being attributed to one of the at least two phases, and wherein the determination of the analyte occurs without physical separation between unbonded and bonded label.

2. (Amended) The method according to Claim 1 in which the method is an affinity assay.

3. (Amended) The method according to Claim 1 in which the analyte comprises a nucleic acid.

4. (Amended) The method according to Claim 1 in which the method is an immuno-affinity assay.

5. (Amended) The method according to Claim 1 in which the volume in which the detection reaction occurs is less than 1 µl.

6. (Amended) The method according to Claim 1 in which the method is a competitive assay.

7. (Amended) The method according to Claim 1 in which the method is a sandwich assay.

8. (Amended) The method according to Claim 1 in which the analyte or the reactant carries a label for generating the measurement signal.

9. (Amended) The method according to Claim 8 in which the measurement signal is generated by irradiation excitement of the label.

10. (Amended) The method according to Claim 8 in which the label is a fluorescent label.

11. (Amended) The method according to Claim 1 in which a first phase of said at least two different phases is a solid phase and a second phase of said at least two different phases is a liquid phase.

12. (Amended) The method according to Claim 1 in which one of said at least two different phases is a solid phase, and

the solid phase is formed on a wall of a well in a sample carrier.

13. (Amended) The method according to Claim 12 in which the carrier is provided in a form of a micro-titre plate.

14. (Amended) The method according to Claim 12 in which a well has a quadratic, cylindrical, truncated pyramid or truncated cone shape.

15. (Amended) The method according to Claim 12 in which a well has an aperture area and a floor area, the aperture area being smaller than the floor area.

16. (Amended) The method according to Claim 15 in which a well has a truncated pyramid or truncated cone shape.

17. (Amended) The method according to Claim 1 in which a quenching substance is linked to a phase for suppressing measurement signals of one of the at least two phases.

18. (Amended) The method according to Claim 11 in which a well is provided for said sample, at least one of the wall and floor of said well being coated with a quenching substance.

19. (Amended) The method according to Claim 1 in which at least one measurement signal is obtained by spatially staggered measurement.

20. (Amended) The method according to Claim 9 in which the sample contains a labelled analyte or a labelled reactant,

and is irradiated with a light beam for stimulation of a label in the labelled analyte or the labelled reactant, and radiation from the label is used as a measurement signal.

21. (Amended) The method according to Claim 20 in which a stimulating light beam is used to stimulate the sample, said stimulating light beam having a diameter in the sample volume of less than 40 µm.

22. (Amended) The method according to Claim 20 in which the stimulating light beam is conducted via the sample.

23. (Amended) The method according to Claim 20 in which a laser provides the stimulating light beam and florescence of the label excited by the laser beam is used to provide a measurement signal.

Please add new claims 33-41 as follows.

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33. (New) The method according to Claim 5 in which the volume in which the detection reaction occurs is in the range of 50 to 100 nl.

34. (New) The method according to Claim 12 in which the sample carrier is provided in a form of a nano-titre plate.

35. (New) The method according to Claim 18 in which the quenching substance is a fluorescence-quenching substance.

36. (New) The method according to Claim 20 in which the stimulating light beam in the sample volume has a diameter of about 20 µm.

37. (New) The method according to claim 1 in which the sample is excited so that only one of the phases is excited.

38. (New) The method of claim 1 in which the sample is excited by a beam of radiation, and in which the size of said beam is selected so as to excite only one of said phases of the sample.

39. (New) The method of claim 1 in which the sample is placed in the well of a carrier, the size, shape and configuration of said well being selected so that only one of the phases of the sample is excited.

40. (New) The method according to claim 1 wherein only one of said phases is excited.

41. (New) The method according to claim 1 wherein the measurement signal is derived from only one of said at least two phases.

IN THE DRAWINGS:

Please approve the changes in the drawings made in the Drawing Amendment submitted herewith.

REMARKS

This application, as amended herein, contains claims 1-23 and newly added claims 33-41. Claims 24-32 have been cancelled. No additional claim fee is due.